SLOPPED ROOF FLASHING SYSTEM AMD METHOD OF USE

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BACKGROUND OF THE INVENTION

The present invention relates to a flashing system using a novel counter flashing and method adapted for use in buildings in order to weather proof the juncture between a slopped roof and a vertical parapet wall of masonry material. A gable, for example, has two vertical parapet walls extending from the surface of a sloped roof forming a sloping juncture between each vertical wall of the gable and its corresponding edge of the sloped roof. It is imperative to seal this juncture from moisture that can penetrate the framework of the building resulting in the accumulation of moisture contributing to mold growth and decay of the framework. The use of roof transition flashing is therefore required. Specifically, the present invention relates to so-called brick on wood applications where the vertical parapet wall is covered with a masonry wall preferably of brick and mortar forming a brick veneer.

In the conventional method, the brick wall is constructed from the channel of a one-piece J-channel flashing shaped like a squared "J". The channel has two upstanding sides, one higher than the other, separated by a bottom or pan section forming the one-piece channel. The J-Channel flashing is positioned at the juncture of the parapet wall and the slopping deck of the roof so that the upstanding high side of the J-Channel is flush with the parapet wall, the pan or bottom is flush with the slopping roof deck and the upstanding low side of the J-channel is rising from the slopping deck, standing alone and opposite the upstanding high side of the J-Channel. The purpose of constructing the brick wall from within the J-Channel is to direct moisture that

has seeped through the brick veneer into the J-channel and away from the roof by force of gravity, utilizing the slop of the roof for this purpose. In order to protect the underlying parapet wall from seeping moisture, a cavity is provided between the brick veneer and underlying parapet wall so that moisture seeping through the brick wall flows down into the channel that acts like a gutter, directing water away from the building and protecting the juncture and parapet wall from exposure to the elements.

A roof flashing is also usually provided that is L-shaped, having a vertical leaf section that is flush with the outer face of the low side of the J-Channel flashing and a horizontal section that is positioned underneath the roof covering material in order to channel water that has seeped into the edge of the roof covering material away from the roof, and to protect the roof deck from exposure from moisture. When shingles are used to cover a slopping roof, single pieces of L-shaped step flashing are frequently employed, the horizontal sections being sandwiched between adjacent layers of overlapping shingles from top to bottom of the slopped roof. Therefore, when the brick wall is built-up from within the J-Channel there are two upstanding sections of exposed flashing protruding from the roof surface at the juncture of the brick wall and the edge of the roof covering material: the vertical low side of the J-Channel flashing and the vertical leaf section of the L-shaped flashing. Both are flush with each other and flush with the base of the brick wall. Counter flashing, therefore, must be employed to protect these exposed flashing sections from exposure to rainwater and moisture.

In the case of flat roof and brick wall transitions, the juncture of the brick wall and flat roof edge lies on a horizontal plane, so that the counter flashing can be attached directly to the same mortar joint between adjacent layers of bricks extending over the entire length of the

juncture. This is accomplished by laying an anchor along one such horizontal mortar joint during construction of the brick wall, providing a means for attachment of a counter flashing apron following construction of the brick wall. In this instance, a two element counter flashing system is employed. This system, however, is not suitable in the case of slopped roof transitions because the brick wall and roof edge juncture lies at an angle to the bricks instead of on a horizontal plane parallel to the layout of the bricks. Because the counter flashing must be parallel to the slopping juncture in order to provide effective counter flashing for the low side of the J-Channel and vertical leaf section of the L-shaped roof flashing, the completed brick wall or veneer must be gouged in parallel relationship to the slope of the roof and the counter flashing attached and sealed in the gouge with extraneous material, such as, adhesive sealant. There are disadvantages, however, that are associated with this method of counter flashing. First, the gouge in the brick wall, although critical for proper attachment of counter flashing, is frequently crude where cutting is performed through disparate densities of brick and mortar. Also, an adhesive sealant must properly be introduced into the gouge or grove to secure and protect against moisture penetration and for secure attachment of the counter flashing anchor. Furthermore, this procedure extends the time for completing installation of all flashing, the construction of the brick wall falling between installation of the initial flashing, including J-Channel and L-shaped roof flashing, and completion of the job by attaching the counter flashing to the brick wall after its construction. This requires the return of the flashing artisan to the job site. As a result, additional labor and material costs are incurred. The possibility also exists that attaching the counter flashing anchor and sealing it in the gouge or grove of the brick wall is performed improperly, creating an opportunity for moisture penetration into the brick wall.

SUMMARY OF THE INVENTION

The object of the present invention, therefore, is to eliminate the need for the added step of installing counter flashing after construction of the brick wall. It is therefore an object of the present invention to save labor and material costs in the installation of transition flashing for slopped roofs common to many residential structures. According to the present invention, this is accomplished by interfitting specific sections of the J-Channel and L-shaped roof transition flashing with a counter flashing adapted for this purpose before constructing the brick wall. It is therefore an object of the present invention to have all necessary flashing in place prior to starting construction of the brick wall. Accordingly, a one-piece counter flashing with a flange section and a slit is provided so that the brick wall can be built from within the J-channel to include the flange section in the brick wall. The exposed transition flashing sections, such as, the low J-channel side and vertical leaf of the L-shaped roof flashing are securely fitted in the slit of the counter flashing of the present invention and thus protected from exposure. The present invention also includes a method of installing flashing that eliminates the necessity of gouging the brick wall and installing and sealing an anchor in the gouge for removable attachment of the counter flashing apron.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the flashing system according to the present invention.

FIG. 2 is a perspective view of the one-piece counter flashing according to the present invention.

FIG. 3 is a cross-sectional view of the one-piece flanged counter flashing according to the present invention.

FIG. 4 is a cross-sectional view of the flashing system and brick wall under construction.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT OF THE INVENTION

Referring to Fig. 2 and Fig.3, the one-piece counter flashing **10** of the present invention has a flange **16** extending laterally from the top edge **14** of the apron **12**. As shown, the flange **16** is turned downwardly upon itself in the manner of a hairpin to form a lip **18** from which a vertical planar section **20** extends downwardly in substantial parallel and spaced relationship to the apron **12** forming a slit **24**. As shown in Fig. 4, the counter flashing **10** is adapted for interfitting with a J-Channel flashing **26** and L-shaped roof flashing **36a.** Specifically, as shown in in Fig 4, the vertical leaf section **38a** of the L-shaped roof flashing **36a** is positioned flush with the outer face of the low side **30** of the J-Channel flashing **26**. Both low side **30** and vertical leaf section **38a** are securely fitted in the slit **24** so that the apron **12** overlies the vertical leaf section **38a** protecting the vertical leaf section **38a** and low side **30** from exposure to rain water. Moreover, as shown in Fig. 4, the horizontal section **40a** of the L-shaped flashing **36a** protects the roof deck **42** against any moisture seeping into the corner of the L-shaped flashing **36a** below the indented flange **22.** Accordingly, a lip **62** at the terminus of the horizontal section **40a** is provided in order to trap such moisture and insure that such moisture will run off in the

space **64** between the roof covering material and the horizontal section **40a.** It is noted that the L-shaped roof flashing **36** shown in Fig. 1 is a plurality of step flashing units, the vertical leaf sections **38** protruding above the edge of the shingles **56** while the underlying horizontal sections **40** are sandwiched between adjacent layers of shingles **58** from top to bottom of the slopped roof **48**. The L-shaped roof flashing **36** can also fabricated to form the single unit of L-shaped flashing **36a** in Fig 4, extending the length of the juncture, having a continuous vertical leaf section **38a** upstanding at the edge of the roof covering material **44** and a continuous horizontal section **40a** positioned between the roof covering material **44** and roof deck **42.**

Once the flashing units are in position and fitted together, the system according to the present invention is complete and construction of the brick wall can begin. The wall is built up from within the J-channel **28** as shown in Fig. 4, forming a brick veneer over the underlying parapet wall **50**, usually made of framed wood covered by protective sheathing **52**. As shown therein, the flange **16** is included between layers of bricks **46** in the wall during its construction. A cavity **54** is provided extending vertically from within the J-channel **28** between the bricks **46** and the parapet wall **50**, so that moisture that has seeped through the brick veneer can migrate down the interior of the veneer inside the cavity **54** to the surface of the pan section **34** of the J-channel **28.** The J-Channel **28** therefore serves as a gutter allowing moisture to run off due to the slope of the roof **48**. The J-channel **28** itself is formed by the high side **32** of the J-Channel flashing **26** flush with the parapet wall **50,** and the low side **30** separated by the pan section **34** that forms the bottom section of the J-channel **28**. As shown in Fig. 4, a flange **60**, extending from the top edge of the low side **30** at an angle to the outer face of the low side **30** and over the

vertical leaf section **38a** is provided to guard against migrating moisture. Specifically, the flange 60 guards against moisture that has seeped into cavity **54** and downward into J-Channel **28** from migrating from the J- channel **28** to the interface between the outer face of the low side **30** and the vertical leaf section **38a** that is flush with the low side **30**.

In the initial construction of the masonry wall from within the channel **28**, the bricks **46** must be mitered to account for the angle of the slopped roof **48** because the brick wall is constructed on a horizontal plane as shown in Fig. 1. When the brick wall has been constructed, only the apron **12** of the one-piece counter flashing **10** is visible and aesthetically pleasing.

Each unit of flashing system of the present invention is preferably made from fabricated sheet metal that is cut, bent, folded and shaped accordingly. The counter flashing **10** of the present invention is preferably made of one piece of sheet metal, although other suitable material can be used. The interior of the J-Channel flashing **26** and J-Channel **28** is preferably coated with a polymeric material, such as, a commercially available rubber-based material known as "Carsile" to protect against mold growth.

According to the method of the present invention, the separate step of installing the counter flashing after the brick veneer has been constructed is eliminated by assembling and installing all flashing units comprising the system of the present invention before beginning construction of the brick veneer, thus avoiding the necessity of gouging the veneer to form a groove for attaching the counter flashing. This is accomplished by the flanged counter flashing **10** and slit **24** specifically fabricated for fitting with the J-Channel flashing **26** and L-shaped roof flashing **36**. When properly positioned, the flange section **16** will extend partially over the

J-Channel **28** as shown in Fig. 1 and Fig. 4 to be included as an integral component in the brick veneer.

The invention has been described with reference to the preferred embodiment. Obviously, modifications ans alterations will occur to others upon reading and understanding the preceding detailed description. It is intended that the invention be construed as including all such modifications and alterations insofar as they come within the scope of the appended claims or the equivalents thereof.